

WO 2004/045491 A3

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
3 June 2004 (03.06.2004)

PCT

(10) International Publication Number
WO 2004/045491 A3

- (51) International Patent Classification⁷: C12Q 1/68, (81) Designated States (*national*): AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, EG, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK (utility model), SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (21) International Application Number: PCT/IL2003/000957
- (22) International Filing Date: 12 November 2003 (12.11.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 60/426,876 18 November 2002 (18.11.2002) US
- (71) Applicant (*for all designated States except US*): YISSUM RESEARCH DEVELOPMENT COMPANY OF THE HEBREW UNIVERSITY OF JERUSALEM [IL/IL]; Hi Tech Park, The Edmond J. Safra Campus, The Hebrew University of Jerusalem, Givat Ram, 91390 Jerusalem (IL).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): SHIR, Alexei [IL/IL]; 13/309 Guatemala Street, 96704 Jerusalem (IL). LEVITZKI, Alexander [IL/IL]; 11/6 Burla Street, 94713 Jerusalem (IL).
- (74) Agent: G. E. EHRLICH (1995) LTD.; 11 Menachem Begin Street, 52521 Ramat Gan (IL).

(84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
8 July 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: TARGETED DOUBLE STRANDED RNA MEDIATED CELL KILLING

(57) Abstract: A method of killing a specific target cell/tissue is disclosed. The method comprises exposing the specific target cell/tissue to a composition-of-matter comprising a double stranded RNA molecule associated with a targeting moiety selected capable of targeting to the specific target cell/tissue, thereby killing the specific target cell/tissue.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL03/00957

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C12Q 1/68; A01N 43/04; C07H 21/04; A61K 31/07
US CL : 435/6, 325, 375, 91.1; 536/24.5, 23.1, 24.3, 514/44

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 435/6, 325, 375, 91.1; 536/24.5, 23.1, 24.3, 514/44

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	OGRIS et al. DNA/polyethylenimine transfection particles: Influence of ligands, polymer size, and PEGylation on internalization and gene expression. AAPS PharmSci, 2001, Vol. 3(3) article 21, pages 1-11.	1-71
Y	SOSNOWSKI et al. Targeting DNA to cells with basic fibroblast growth factor (FGF2). Journal of Biological Chemistry, 1996 Vol. 271, No. 52, pp. 33647-33653.	1-71
Y	XU et al. The contribution of poly-L-lysine, epidermal growth factor and streptavidin to EGF/PLL/DNA polyplex formation. Gene Therapy, 1998 Vol. 5:1235-1243.	1-71

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"B" earlier application or patent published on or after the international filing date

"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"O" document referring to an oral disclosure, use, exhibition or other means

"Z"

document member of the same patent family

"P" document published prior to the international filing date but later than the priority date claimed

Date of the actual completion of the international search

Date of mailing of the international search report

23 March 2004 (23.03.2004)

01 JUN 2004

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Authorized officer

Terra C. Gibbs

Telephone No. (571) 272-0564

Faxsimile No. (703) 305-3230

INTERNATIONAL SEARCH REPORT

PCT/IL03/00957

Continuation of B. FIELDS SEARCHED Item 3:

EmBase, CaPlus, Medline, WEST

search terms: double-stranded RNA, dsRNA, epidermal growth factor, EGF